SE - EXTC 29/5/14
sem IV

QP Code : NP-19770

(3 Hours) **[Total Marks : 80**

Sub :- Microprocessors & peripherals.

Q1. Is compulsory

Solve any **3** out of remaining

Q1 A Explain functions of following Pins of microprocessor 8085. (5 marks)

a) ALE b) SOD/SID c) TRAP d) HOLD f) $\overline{INTA}$

Q1 B Explain Control Word of 8254 Timer. Write control word for Counter 0, Mode-2, R/W LSB, BCD counter. (5 marks)

Q1 C. Write features of 80286 microprocessor. (5 marks)

Q1. D. What are advantages of memory segmentation of 8086. (5 marks)

Q2. A. Draw and Explain Architecture of 8085 Microprocessor. (10 marks)

Q2 B. Explain Minimum mode of 8086 microprocessor. Draw timing diagram for write operation in minimum mode of 8086 and explain it. (10 marks)

Q3. A. Draw and explain interfacing of 8086 with 8255 I/O mapped I/O mode. (10 marks)

Q3 B Write a Program to generate 1 KHz frequency square wave using 8254, if clock frequency of 8086 is 1 M Hz. (10 marks)

Q4 A. Draw and explain interfacing of DAC 0808 with 8086 using 8255. Write a program to generate square wave. (10 marks)

Q4 B. Draw and interface diagram of 8086 microprocessor and 8087 NDP, also explain various interface signals and co-processor working with host processor. (10 marks)

Q5. A. Design 8086 microprocessor based system using minimum mode with following specifications:-

i. 8086 microprocessor working at 8 MHz
ii. 32 KB EPROM using 16 K devices
iii. 32 KB SRAM using 16 K devices

Clearly show memory map with address ranges. Draw a neat Schematic. (10 marks)

Q5. B. Explain interrupt structure of 8086. (10 marks)

Q6. A Write a Program for 8086 microprocessor to exchange memory block of 10 bytes of location 30000 and 40000 (10 marks)

Q6. B. Draw and explain an architecture of Pentium processor. (10 marks)

Con. 12203-14.